A study of mediating effect of trust on customer satisfaction and customer loyalty relationship in Malaysian rural tourism

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Abstract
The main purpose of this study is to develop a mediating effect understanding of trust on service customer satisfaction and customer loyalty relationship in Malaysia rural tourism. The Structural Equation Model (SEM) used to analyze the casual relationships among customer satisfaction, customer trust and customer loyalty. The model was developed and later tested by adopting the Partial Least Square (PLS) procedure on data collected from a survey that yielded 295 usable questionnaires. The findings showed that customer satisfaction enhances trust in Malaysia rural tourism. It was also revealed that trust partially mediates the relationship between customer satisfaction and customer loyalty. In future more research needs to be carried out to explore the role of trust in Malaysia rural tourism industry. It is important to do the study utilizing experimental design by capturing longitudinal data in Malaysia rural tourism industry using robust measures. The findings imply that the relationship between trust and profitability may dwell in trust’s influence on customer loyalty, and that trust plays a crucial function within the Malaysia rural tourism industry. This research is one of the first known attempts to use PLS to test a mediation effect.

Keywords: Rural tourism, customer satisfaction, trust, customer loyalty


Introduction
In today’s global economy, tourism is one of the fastest growing sectors. A strong growth catalyst that can generate higher multiplier effect, tourism plays a very important role in the economy and stimulates the growth of other economy. In Malaysia, tourism is the third largest industry, in terms of foreign exchange earnings, after manufacturing and palm oil sector. Tourism sector contributes about 7.9% to the GDP of Malaysia, suggesting that the industry, which is considered still new, but yet, has offered so much good potential for further and future growth. In 2011, the global tourism and travel sector has generated USD 7 trillion in economic activities and this will offer more than 260 million jobs opportunity (Goeldner & Ritchie, 2003). In 2011, Malaysia had been visited by more than 24.7 million tourists which an increase of 0.4% from 2010 which was
about 24.6 million tourists. (Tourism Malaysia Annual Report, 2011). In tourism industry, tourists are very important to ensure the customer will visit the tourist attraction again, after they have experience it the first time. The concept of loyalty can be defined that a customer would come back or continuously to utilize the same product or service from the same organization, make business referrals, and directly, or even indirectly, offering strong word-of-mouth references and publicity (Bowen & Shoemaker, 1998). Customers, who are loyal, are not easily influenced or swayed by price enticement from their competitors, and they often buy more, compared to those who are not so loyal (Baldinger & Rubinson, 1996). Conversely, service providers must not feel comfortable because not all retained customers are satisfied ones and similarly not all of them can be always retained. There are many factors for such manner of loyal customers. There are customers who will remain loyal because the existing of high switching barriers, or the lack, of real substitutes, whereas other customers continue to be loyal since they are satisfied with the service offered. Some customers may remain loyal due to high switching barriers, or the lack of real substitutes, while others continue to be loyal because they are satisfied with the services provided. The purpose of this paper to show the link between customer satisfaction and trust in customer loyalty in Malaysian rural tourism market to test the conceptual research model that connect, customer satisfaction, trust and customer loyalty.

Literature Review

Customer Satisfaction

Customer satisfaction is one the most areas being researched in many tourism studies due to its importance in determining the success and the continued existence of the tourism business (Gursoy, Mc Cleary and Lepsito, 2007). Customer satisfaction conceptually has been defined as feeling of the post utilization that the consumers experience from their purchase (Westbrook and Oliver, 1991; Um et al., 2006). Opposite to cognitive focus of perceptions, customer satisfaction is deemed as affective response to a products or services (Yuan and Jang, 2008). A consumer is deemed to be satisfied upon the experience weighted sum total produce a feeling of enjoyment when compared with the expectation (Choi and Chu, 2001). In tourism studies, customer satisfaction is the visitor’s state of emotion after they experiencing their tour (Baker and Crompton, 2000; Sanchez et al., 2006). Destination holiday's customer satisfaction is the extent of overall enjoyment that the tourists feel, the result that the tour experience able to fulfill the tourists’ desires, expectation, needs and wants from the tour (Chen and Tsai, 2007). Taylor et.al, (2004) pointed out that customer satisfaction has a direct influence on customer loyalty. Kotler, (2008) describes customer satisfaction is the feeling of happiness or unhappiness as a result of comparing the perceived performance of services or products with the expected performance. If the perceived performance does not meet the expected performance, then the customer will feel disappointed or dissatisfied. Homburg et al., (2006) suggested that customer satisfaction has been a crucial issue in marketing field in the past decades since satisfied customers are able to offer to the company such as customer loyalty and continuous profitability.

Trust

In the current study, trust has been defined as a tourists’ willingness to rely on tourist attraction operator’s ability to deliver what has been promised and meet or exceed the expectation of the tourists which has been built around of the knowledge about the tourist attraction. A trusted tourist attraction has a strong advantage over the other tourist attraction which is an alternative in the tourist’s decision making process. In tourism studies, Loureiro and Gonzalez (2008) showed empirical evidence that tourists’ trust has a strong influence on their loyalty toward rural lodging.

According to Lau & Lee (1999) if one party has trust in another party, it will produce positive behavioral intentions towards the other party. Trust has influence on credibility and credibility will eventually has impact on the customer’s long-term orientation by decreasing the risk perception linked to the opportunistic behavior of the business (Erdem et al., 2002; Ganesan, 1994). To be specific, trust minimizes customer’s uncertainty feelings where
customer feels at risk because they know that they can rely on the service provider (Chaudhuri and Holbrook, 2001). San Martin Gutierrez (2000) describes trust the emotional security that made one party to think that another party is responsible and concern about it. This gives the understanding that the former is ready to be at risk to the actions of the second party regardless its ability to control the later.

Customer loyalty
The concept of customer loyalty has been researched for the past decades in business industries. Loyalty is a commitment of current customer in respect to a particular store, brand and service provider, when there are other alternatives that the current customer can choose for (Shankar, Smith & Rangaswamy, 2003). It forms positive attitudes by producing repetitive purchasing behavior from time to time. There is a strong connection customer loyalty and firm’s profit. Zeithaml, (2000), states that previous researches look at customer loyalty as being either attitudinal or behavioral. The behavioral perspective the customer is loyal as long as they continue to purchase and use the goods or services (Woodside et al., 1989; Parasuraman et al., 1988; Zeithaml et al., 1996). Reicheld (2003) suggested that the most superior evidence of the customer loyalty is the proportion amount in percentage of current customers who are having lots of enthusiasm to recommend a specific good or service to their friends. Whereas, the attitudinal perspective, the current customers have a feeling of belongings to a specific product or service or commitment of the current customers towards a specific good or service. Baumann, Burton & Elliot, (2005) found that Day (1969) had introduced the concept of customer loyalty covering both behavioral and attitudinal dimensions forty years ago.

Research model and hypotheses
Research model
Tourist attraction operators are keen to know how customer satisfaction can lead to customer trust and, eventually, create customer loyalty for the tourists. The research applies the research model by a few authors mostly Parasuraman et al. (1985), Bitner & Zeithaml (2003) and Morgan & Hunt (1994). The conceptual model of this study is illustrated in Figure 1.

Hypotheses
Relationship between customer satisfaction and customer loyalty

Figure 1. Theoretical framework
The survival and sustainability of any business organization is largely depends on the customer satisfaction and customer loyalty. Faullant, Matzler, & Ller (2008) in their study on 6172 ski resort customers in Australia have found that customer satisfaction is positively and significantly correlated to customer loyalty. Pantouvakis & Lymeropoulos (2008) have done the study on 388 ferry passengers in Greece and revealed that customer satisfaction has great impact on customer loyalty and positively and significantly correlated with customer loyalty. Akhbar & Parvez (2009) in their study on 302 telecommunication customers in Bangladesh have found that customer satisfaction is significantly and positively related to customer. Hume & Mort (2010) conducted a study on 250 performing arts members and audience and have found that customer satisfaction very much has impact on customer loyalty and positively and significantly related. Chen & Lee (2008) in their study on 261 non Vessel Owners and shippers in Taiwan’s International Logistic Provider industry has revealed that customer satisfaction is the critical factor in developing customer trust. Kantsperger & Huntz (2010) in their study on 357 E-services customer in Malaysia and Qatar E-Commerce have revealed that customer satisfaction is the main antecedent to trust and positively and significantly correlated. Yeh & Li (2001) in their study have also found a similar result where in their study on 212 m-commerce customers in Taiwan revealed that customer satisfaction has a stronger impact on trust and significantly and positively correlated. Ribbink, Riel & Semeijn (2005) in their study on 350 online customers in Europe e-commerce industry have found that customer satisfaction has greater influence on trust and significantly and positively related to trust. Edwin, Nic & Christo (2011) studied the B2B financial services in South Africa concur the above findings where they found that customer satisfaction has a positive and significant influence on trust. In view of that we hypothesize:

H2: There is a positive relationship between customer satisfaction and trust
A study of mediating effect of trust on customer satisfaction and customer loyalty relationship in Malaysian rural tourism.

Many studies had indicated that customer satisfaction is antecedent to the broader idea of customer trust (Gotlieb et al., 1994; Buttle, 1996; Zeithaml and Bitner, 2008; Lee et al., 2000). Eisingerich and Bell, (2007) found that customer satisfaction had a significant effect on customer loyalty and trust, and trust had a significant effect on customer loyalty. However, the causal relationship between customer satisfaction and trust seems not to be very clear in the literature. Zanzo et al. (2003) found that, satisfaction acts as an antecedent to trust, and trust as an antecedent to customer loyalty. Moreover, trust directly affects loyalty as well. In view of that, we hypothesize:

H4: There is a positive indirect relationship among customer satisfaction, trust and customer loyalty

Methodology
Survey instrument
A total of 15 observed variables constitute the measurement of exogenous independent variable of customer satisfaction of 5 items. The endogenous of trust consists of 5 items, and customer loyalty – 5 items. The scaling applied in this study is the 5-point Likert scale of 1-strongly agree, 2-agree, 3-neutral, 4-disagree and 5-strongly disagree. The demographics variables questioned are gender, age, status, place of origin, race, occupation, annual income, and education background of the respondents.

Sample
Local and foreign tourists, who have visited the rural tourism spot in Malaysia at least once, were the main respondents. A total of 410 rural tourism spot tourists were requested to complete a questionnaire that contained

Table 1. Operationalization of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction</td>
<td>Customers’ evaluation of a product or service in terms of whether that product or service has met their needs and expectations.</td>
<td>Bitner &amp; Zeithaml (2003)</td>
</tr>
<tr>
<td>Customer trust</td>
<td>Actual customer’s belief in receiving the service promised by the provider and a demonstration of the confidence of the customer in exchange of partner reliability and integrity</td>
<td>Morgan &amp; Hunt (1994)</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>The mind-set of the customers who hold favorable attitudes toward a company, commit to repurchase the company’s product/service, and recommend the product/service to others</td>
<td>Zeithaml et al. (1996)</td>
</tr>
</tbody>
</table>
measures of the construct. The questionnaires were distributed to the respondents in Klang Valley, Malaysia through email and on the spot by using simple random sampling technique. Out of the 410 distributed questionnaires, 329 were returned. This made up the response rate of 80.24%. In view of that, the rate of response is sufficient for SEM analysis. The Mahalanobis distance was determined based on a total of 31 observed variables. The criterion of p<0.01 and critical value of $\chi^2 = 86.40$ is applied. The test conducted identified 34 cases with Mahalanobis value ($D^2$) above 86.40. The Mahalanobis analysis successfully identifies the multivariate outliers which were deleted permanently, leaving 295 datasets to be used for further analysis.

Data analysis
Partial Least Squares (PLS) (Chin, 1998a, b, 2001) was adopted to assess the models. PLS is a second generation structural equation modeling (SEM) technique developed by Wold (1982). It works fine with structural equation models that have latent variables and a series of cause-and-effect relationships (Gustafsson and Johnson, 2004). PLS has three main advantages over other SEM techniques that make it suitable to this study. First, in PLS, constructs may be gauged by only one item whereas in covariance-based techniques, minimum of four questions per construct are required. Second, in many marketing studies, data tend to be distributed non-normally (it is noted that mostly ten-item scales were employed to reduce a negative impact of non-normality), and PLS does not need any normality assumptions and handles non-normal distributions relatively well. Third, PLS accounts for measurement error and should offer more accurate estimates of interaction effects such as mediation (Chin, 1998a). PLS provides challenges and opportunities for the mediation effects study.

However, it is particularly suitable to the study of mediation. Mediation effects are the outcome of two relationships; between the independent variable and the mediator, and between the mediator and the dependent variable. The product of two normally distributed variables is always skewed (Bollen and Stine, 1990, Lockwood and Mackinnon, 1998), but PLS does not depend on normality assumptions. PLS adopts bootstrapping to assess the significance of relationships so it works better with non-normal data (Efron, 1988). Therefore, PLS may do well in assessing mediation effects. On the other hand, there are no official rules providing instructions on how to use PLS to assess mediation. There are, however, general suggestions for evaluating mediation that can be classified into three general approaches (Mackinnon et al., 2002). The first method, known as the causal steps approach, is based on the works of Judd and Kenny (1981) and Baron and Kenny (1986). Investigation on the ISI Web of Science citation database indicates that Baron and Kenny’s paper has been cited over 8,120 times that enhance credibility to this method. The second approach, known as the difference in coefficients method, evaluates regression coefficients prior and after the mediating variable is incorporated. The third technique is drawn as the product of coefficients comprising paths in a path model approach. The first approach utilizes regression analysis.

The last two approaches utilize the goodness-of-fit indices provided by Effect of organizational reputation 1433 covariance-based SEM. SEM technique is preferred for mediation analysis (Frazier et al., 2004). PLS works well with the casual steps approach that depends on regression analysis. The path coefficients, created by PLS, give a sign of relationships and can be utilized similarly to the usual regression coefficients (Gefen et al., 2000). Firstly, a direct linkage must be established between the independent and dependent variable to ensure there is a relationship to be mediated. Secondly, a direct relationship must be established between the independent and mediator variable. Thirdly, the mediator must be shown to be related to the dependent variable. Finally, the relationship between the independent and dependent variables must reduce significantly when the mediator is added. The relationships between the independent and dependent variables as well as the independent and mediating variables should be theoretically based and supported by the previous literature.
These four steps will be emulated in this study using PLS. To evaluate the indirect effects significance, it is important to explicitly model the two paths both directed in and out of the mediating construct. It is suggested that for evaluating the significance of indirect paths in a PLS structural model, the application of the same bootstrapping procedure as done elsewhere with path analysis. The two step bootstrapping technique for testing mediation is as follows:

1. Apply the specific model in question with both direct and indirect paths included and execute N bootstrap re-sampling and explicitly compute the product of direct paths that form the indirect path being assessed.
2. Approximate the significance adopting either percentile bootstrap or bias corrected bootstrap which has been shown to have the least biased confidence intervals, greatest power to detect nonzero effects and contrasts, and the most accurate overall Type I error (Williams and MacKinnon 2008).

Therefore, for the purpose of assessing the significance of the mediating effect based on the above procedure, the PROCESS application developed by Hayes, A. F. (2012) was adopted. The application was embedded in SPSS ver. 18

Results
Profiles of respondents
The profile of the individual involved in this study shows that most of the respondents are male (54.2%) and female (45.8%) with the age majority of 21-30 years old (42.7%), <20 years old (3.1%), 31-40 years old (28.8%), 41-50 years old (10.2%) and >50 years old is 15.3%. The number of married and single individuals about the same with married individuals (48.8%), single (48.1%), divorced (2.4%) and Widowed (0.7%). Most of the individual in this study are local (88.8%), Asia (5.1%), Africa (4.1%), Middle East (1.7%) and Europe (0.3%). Race of individual participate in this study are mostly Malay (77.3%), Chinese (5.8%), Indian (4.7%) and others (12.2%). Most of the individual in this study work in government sector (70.8%), own business (2.7%), private sector (17.5%), retired (0.3%) and others (8.5%). Most of the respondents their income is less than RM20000 (31.5%), RM21000-RM30000 (16.6%), RM31000-RM40000 (18.3%), RM41000-RM50000 (8.1%), RM51000-RM60000 (8.1%), RM61000-RM70000 (4.7%) and more than RM70000 (12.5%).

Construct validity, dimensionality and reliability
In order to evaluate the construct’s validity, dimensionality and reliability, all constructs were analyzed. For each construct, the average variance extracted (AVE), the AVE square root, composite reliability; R-Square, Cronbach’s Alpha and communality were computed. Construct validity was acquired by first evaluating Cronbach’s Alpha for individual construct. The results are shown in Table 2. All constructs achieved a higher Cronbach’s Alpha than recommended 0.7 (Hair et al., 2005).

<table>
<thead>
<tr>
<th>Variable</th>
<th>AVE</th>
<th>AVE Square root</th>
<th>CR</th>
<th>R-Square</th>
<th>Cronbach’s alpha</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOY</td>
<td>0.736</td>
<td>0.858</td>
<td>0.933</td>
<td>0.618</td>
<td>0.910</td>
<td>0.736</td>
</tr>
<tr>
<td>SAT</td>
<td>0.668</td>
<td>0.817</td>
<td>0.910</td>
<td>0.00</td>
<td>0.876</td>
<td>0.668</td>
</tr>
<tr>
<td>TRU</td>
<td>0.683</td>
<td>0.826</td>
<td>0.915</td>
<td>0.539</td>
<td>0.884</td>
<td>0.683</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOY</th>
<th>SAT</th>
<th>TRU</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.707</td>
<td>0.817</td>
<td></td>
</tr>
<tr>
<td>0.752</td>
<td>0.735</td>
<td>0.826</td>
</tr>
</tbody>
</table>
that, all constructs were evaluated and processed within the model by using PLS evaluation to get each construct’s AVE, composite reliability and communality. All constructs acquired greater than the minimum required for each parameter. (Chin 19998; Stan & Saporta, 2005).

After that, based on Geffen & Staub (2005), individual construct had its AVE square root extracted to evaluate construct dimensionality. The results obtained, used as a reference when the entire construct correlated and each correlation weight within the two constructs, has to be smaller than the AVE square root as shown in Table 3. All correlations achieved a value lower than AVE’s square root and all parameters (AVE, composite reliability, Cronbach’s Alpha, and communality) achieved satisfactory indices. The results are revealed in Table 2.

**Model analysis**

Firstly, the first model was presented with direct path from satisfaction to trust and satisfaction to loyalty. Both links were significant at the 0.000 level with the path coefficients of 0.707 and 0.734 respectively. At this point no indirect effect was hypothesized or evaluated (Table 4). Then, the second model was presented with trust plays a mediating role between satisfaction and loyalty (refer to Table 5). The two distinct models were made based on Barron and Kenny (1986) four-step technique to assess the mediating effect. The two models had:

1) a direct path from satisfaction to trust
2) a direct path from satisfaction to loyalty
3) a direct path from trust to loyalty
4) a direct path from satisfaction to loyalty, and an indirect path from satisfaction to trust and then from trust to loyalty.

Since PLS makes no distributional assumptions traditional parametric significance, testing is not suitable. Thus, t-statistics are computed by the bootstrap resampling procedure (500 resamples), resulting in t>2.74 and, therefore, p<0.000 (one tailed) for all the relationships in the final estimated model revealed in Table 5.

Mediation is said to be existent when the direct path coefficient between the independent variable and dependent variable is decreases when the indirect path through the mediator is established in the model. The direct path is assessed without the intervention of mediator and with the intervention of mediator. The direct path standardized beta was 0.707 and change to 0.334 after the introduction of trust as a mediator. The amount of the decrease of the relationship between satisfaction and loyalty accounted by the mediator was 0.373 which represent 52.76% of the direct effect.

The mediation effect significance was measured by using PROCESS by Hayes (2012) with the application of bootstrapping technique where the specific model in question with both, direct and indirect, paths included, and execute N bootstrap re-sampling and explicitly compute the product of direct paths that form the indirect path being assessed.

<table>
<thead>
<tr>
<th>Table 4. Direct effect model</th>
<th>Path coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT – LOY</td>
<td>0.707</td>
<td>11.672</td>
</tr>
<tr>
<td>SAT – TRU</td>
<td>0.734</td>
<td>12.338</td>
</tr>
</tbody>
</table>

*Note: t-values are significant at p<0.000*

<table>
<thead>
<tr>
<th>Table 5. Indirect effect model</th>
<th>Path coefficient</th>
<th>t-value</th>
<th>f²</th>
<th>Q²</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT – LOY</td>
<td>0.334</td>
<td>2.745</td>
<td>0.131</td>
<td>0.824</td>
</tr>
<tr>
<td>SAT – TRU</td>
<td>0.734</td>
<td>13.137</td>
<td>1.169</td>
<td>0.824</td>
</tr>
<tr>
<td>TRU – LOY</td>
<td>0.508</td>
<td>4.300</td>
<td>1.309</td>
<td></td>
</tr>
</tbody>
</table>

*Note: t-values are significant at p<0.000*

<table>
<thead>
<tr>
<th>Table 6. Indirect effect significance test</th>
<th>Indirect Effect</th>
<th>Boot SE</th>
<th>Boot LLCI</th>
<th>Boot ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>0.417</td>
<td>0.054</td>
<td>0.314</td>
<td>0.527</td>
</tr>
</tbody>
</table>
A study of mediating effect of trust on customer satisfaction and customer loyalty relationship in Malaysian rural tourism.

Then, the significance of the mediating effect can be ascertained by observing either percentile bootstrap or bias corrected bootstrap which has been shown to have the least biased confidence intervals, greatest power to detect nonzero effects and contrasts, and the most accurate overall Type I error (Williams and MacKinnon, 2008). The result extracted from PROCESS shows that the indirect effect of satisfaction to loyalty with the present of trust

![Figure 2. Direct path coefficient and $R^2$](image1)

![Figure 3. Indirect path coefficient and $R^2$](image2)
Table 7. Hypotheses result

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Relationship</th>
<th>Path coefficient</th>
<th>p-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>There is a positive relationship between customer satisfaction and customer loyalty</td>
<td>0.707</td>
<td>0.00</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>There is a positive relationship between customer satisfaction and trust</td>
<td>0.734</td>
<td>0.00</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>There is a positive relationship between customer trust and customer loyalty</td>
<td>0.508</td>
<td>0.00</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>There is a positive indirect relationship between customer satisfaction and customer loyalty via trust</td>
<td>0.417</td>
<td>0.00</td>
<td>Supported</td>
</tr>
</tbody>
</table>

as a mediating factor is significant at p<.000 where the lower level confidence level (LLCL) is 0.314 and upper level confidence level (ULCL) is 0.527 (Table 6). The indirect effect is significantly different from zero at p<0.000 (two tailed). With 95% confidence that, because zero is not within this interval, zero is not likely a value for the indirect effect of satisfaction on loyalty. The true indirect effect is estimated lies between 0.314 and 0.527. Therefore, the indirect path satisfaction to trust and from trust to loyalty was 0.734*0.508 = 0.373. The confidence interval level provided by PROSESS was between 0.314 and 0.527, p<.000. This shows that the partial mediation effect present. Therefore, all the hypotheses are supported (Table 7).

The paths were analyzed in order to assess the effect size ($f^2$) to differentiate the path that contribute in explaining the dependent variable to which they are attached. Chin (1998b) explains that the $R^2$ for each latent variable (LV) can be a opening point when evaluating PLS for the structured model, since explanation of the PLS is similar to that of a traditional regression. The author also suggests that the change in the $R^2$ can be investigated to see whether the impact of a specific independent LV on a dependent LV is extensive. Following Chin’s (1998b) recommendation, effect size can be calculated as:

$$f^2 = \frac{R^2_{included} - R^2_{excluded}}{1 - R^2_{included}}$$

where $R^2$ included and $R^2$ excluded are the $R^2$ provided on the dependent LV, when the predictor LV is used or omitted from the structural equation, respectively. The $f^2$ of 0.02, 0.15 and 0.35 can be translated as a predictor LV having a small, medium, or large effect at the structural level (Table 5).

The Q-square ($Q^2$) for the structural model which imply the predictive relevance of the model is acceptable which is 0.734 (Table 5). Q-square for the structural model is to gauge how fit the observations produced by the model and to assess its parameters. If the value of $Q^2 > 0$, it signifies that the model has predictive relevance; on the other hand, if the value of $Q^2 < 0$, it signifies that the model is having predictive relevance deficiency. This shows that the ability of the Partial Least Model to demonstrate the model is 82.4%. Therefore, only 17.6% of other factors are not observable to describe this effect. Therefore, it can be concluded that the model can be used appropriately. The predictive measure for the block becomes:

$$Q^2 = 1 - (1 - R_1^2) (1 - R_2^2) ...(1 - R_p^2)$$

Discussion and conclusion

Research conclusions

The main purpose of this research is to establish an understanding of the mediating effect of customer trust on customer satisfaction and customer loyalty relationship in Malaysia rural tourism industry. This research aims to develop a probable causal relationship between the variables, which are customer satisfaction, trust and customer loyalty. Based on this, a review from the previous study in the area of customer satisfaction, trust and customer loyalty was performed. From the initial findings of academic studies, the model was constructed and it’s found that customer satisfaction has a positive and significant direct effect on trust. Also from the same model, it
was found that customer satisfaction has a positive and significant direct effect on customer loyalty. Then, the mediating relationship was introduced in the model where trust was introduced as a mediator in customer satisfaction and customer loyalty relationship. Theoretically, it is not easy to justify the superiority of any model, so empirical testing was performed. This study proposed a model to empirically test and confirm that there are positive direct relationships between customer satisfaction, trust and customer loyalty. In order to achieve this objective, the PLS technique data analysis was adopted. There are a few points that need to be observed. Firstly, the most accepted relationship between customer satisfaction and trust is authenticated. The path coefficient of direct relationship between the customer satisfaction and trust is 0.734 and is significant. Secondly, the most accepted theory that link customer satisfaction and customer loyalty also well supported with the path coefficient of direct relationship between customer satisfaction and customer loyalty is 0.707 and is significant. Thirdly, this research is to empirically analyze the proposed mediating effect of customer satisfaction on service quality and trust relationship. The amount of the relationship between customer satisfaction and customer loyalty accounted by the mediator was (0.707-0.334) = 0.373, which represents 52.76 percent of the direct effect. In view of that, it is concluded that trust is partially mediates the relationship between customer satisfaction and customer loyalty. Based on the above findings, it is concluded that trust plays a role as a mediator and has mediating effect on customer satisfaction and customer loyalty relationship in Malaysia rural tourism industry.

Practical implications
The practical implications that can be drawn are to improve customer satisfaction of rural tourism spots. As the research revealed, customer satisfaction has a direct effect on customer loyalty mediated by tourist trust, and then on tourist loyalty. Secondly, rural tourism spots should put in place good customer relationship with tourists, execute customer relationship management and create tourist’s trust. The research demonstrates that rural tourist trust leads to customer loyalty. Thirdly, tourist trust should be paid attention to by rural tourism operators. The research signifies that rural tourist trust is the most indirect and important antecedent to loyalty. Trusted rural tourists not only will revisit and be low probability to look alternatives, but also have word-of-mouth recommendations, which means that satisfied customers are absolutely loyal to rural tourist areas and helpful with new market development.

Research limitations and directions for future research
As an exploratory study, this paper instituted the customer satisfaction on rural tourist loyalty influential mechanism model, and performed in the scientific and systemic empirical research, and made firm conclusions, while it has some shortcomings due to research funding and ability. In view of that, some future directions should be carried out. Firstly, with regards to research samples, this study only chose rural tourist in Klang Valley areas as respondents. And this study lacks discussions on that whether the geographical factors, as a mediating variable, will have impact on rural tourist loyalty. Secondly, on the sampling time and space, they study only acquired the latitudinal data belonging to static research. Nevertheless, if we desire to institute the causal relationships between variables, it’s better to make a follow-up examination to collect longitudinal data to analyses. In view of the above limitations, on one hand, further research may be performed on cleansing our scale to get better internal validity. On the other hand, the survey should be done on different types and timings to obtain the generic model to improve the external validity.

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